

D.N. 0203.00

We claim:

1. A transformation system comprising a vector containing a nucleotide sequence from a piggyBac transposon in which is inserted at least one fluorescent protein gene linked to a promoter region of a polyubiquitin gene.
2. A transformation system of claim 1 further comprising a *piggyBac* transposase helper plasmid under heat-shock promoter regulation.
3. The transformation system of claim 1 wherein said polyubiquitin gene is from *Drosophila melanogaster*.
4. The transformation system of claim 2 wherein said polyubiquitin gene is from *Drosophila melanogaster*.
5. The transformation system of claim 1 wherein said *piggyBac* transposon is modified by deleting about 748 bp of internal *piggyBac* sequence.
6. A transgenic organism transformed using the transformation

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system of claim 3 wherein said organism is detectable under ultraviolet light.

7. A transgenic insect transformed using the transformation system of claim 3 wherein said insect is detectable under ultraviolet light.

8. The transgenic insect of claim 8 that continues to be detectable under ultraviolet light after death.

9. A transformation system comprising a vector containing a *piggyBac* transposon which is modified by deleting about 748 bp of internal *piggyBac* sequence.

10. A transformation system comprising a vector containing a *piggyBac* transposon which is modified by deleting about 748 bp of internal *piggyBac* sequence and a promoter region of a polyubiquitin gene.

11. A transformation system of claims 9 or 10 further comprising a *piggyBac* transposase helper plasmid under heat-shock promoter regulation.

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12. A vector comprising a nucleotide sequence from a *piggyBac* transposon in which is inserted at least one fluorescent protein gene linked to a promoter region of a polyubiquitin gene.

13. The vector of claim 12 further comprising a *piggyBac* transposase helper plasmid under heat-shock promoter regulation.

14. The vector of claim 12 wherein said polyubiquitin gene is from *Drosophila melanogaster*.

15. The vector of claim 13 wherein said polyubiquitin gene is from *Drosophila melanogaster*.

16. The vector of claim 12 wherein said *piggyBac* transposon is modified by deleting about 748 bp of internal *piggyBac* sequence.

17. A vector comprising a *piggyBac* transposon which is modified by deleting about 748 bp of internal *piggyBac* sequence.

18. A vector comprising a *piggyBac* transposon which is modified by deleting about 748 bp of internal *piggyBac* sequence and a promoter region of a polyubiquitin gene.

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19. The vector of claims 17 or 18 further comprising a piggyBac transposase helper plasmid under heat-shock promoter regulation.